AMERICAN MUSEUM NOVITATES

Number 787 | Published by THE AMERICAN MUSEUM OF NATURAL HISTORY New York City | April 1, 1935

56.9, 72 B (51.7)

A REVISED RESTORATION OF THE SKELETON OF *BALUCHITHERIUM*, GIGANTIC FOSSIL RHINOCEROS OF CENTRAL ASIA[1]

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The present article is designed to supplement our full report (now awaiting publication) upon the *Baluchitherium* material obtained by the Central Asiatic Expedition in 1922 to 1930.

The specimens are from the Hsanda Gol and Houldjin formations of Oligocene age. The drawings are by Mrs. Helen Ziska.

The principal parts of the skeleton (Fig. 1), except the sternebrae, are represented in the collection. There is an enormous range in the size of the adults, the smallest middle metacarpal of the manus measuring 390 mm. (Amer. Mus. No. 21618), the longest, 635 mm. in length. We have grouped our material under four descending grades of size. The middle metarcarpal of Grade I is 1.4 times as long as that of Grade IV; it is about 1.3 times that of Grade III and 1.2 times that of Grade II. Consequently these factors have been used (Fig. 2) in enlarging bones of the smaller grades to the probable size of Grade I, which is represented by several gigantic cervical vertebrae and by the third metacarpal. Grade II includes the huge skull, a lower jaw associated with a humerus, radius and middle metacarpal, and several ribs (Amer. Mus. No. 26166). Grade III is represented by the smaller occiput, atlas, axis. Grade IV includes associated manus and pes and various associated vertebrae, ribs, femur, tibia and middle metatarsal.

After repeated revisions our restoration (Fig. 2) represents an animal of the largest grade, seventeen feet, three inches in height, at the shoulder (top of spine at first dorsal vertebra). The height at the shoulder as thus estimated far exceeds that of the tallest hitherto known land mammal. The skull is relatively small; the axis is comparatively long and low but cervicals 4 to 7 are relatively very broad and low as compared with those of recent rhinoceroses.

On the whole, our restoration makes *Baluchitherium* not unlike one of the primitive hornless Oligocene rhinoceroses, except for its titanic size and relatively long radius, long femur, small head, elongate axis and wider mid-cervicals.

[1]Publications of the Asiatic Expeditions of The American Museum of Natural History. Contribution No. 130.

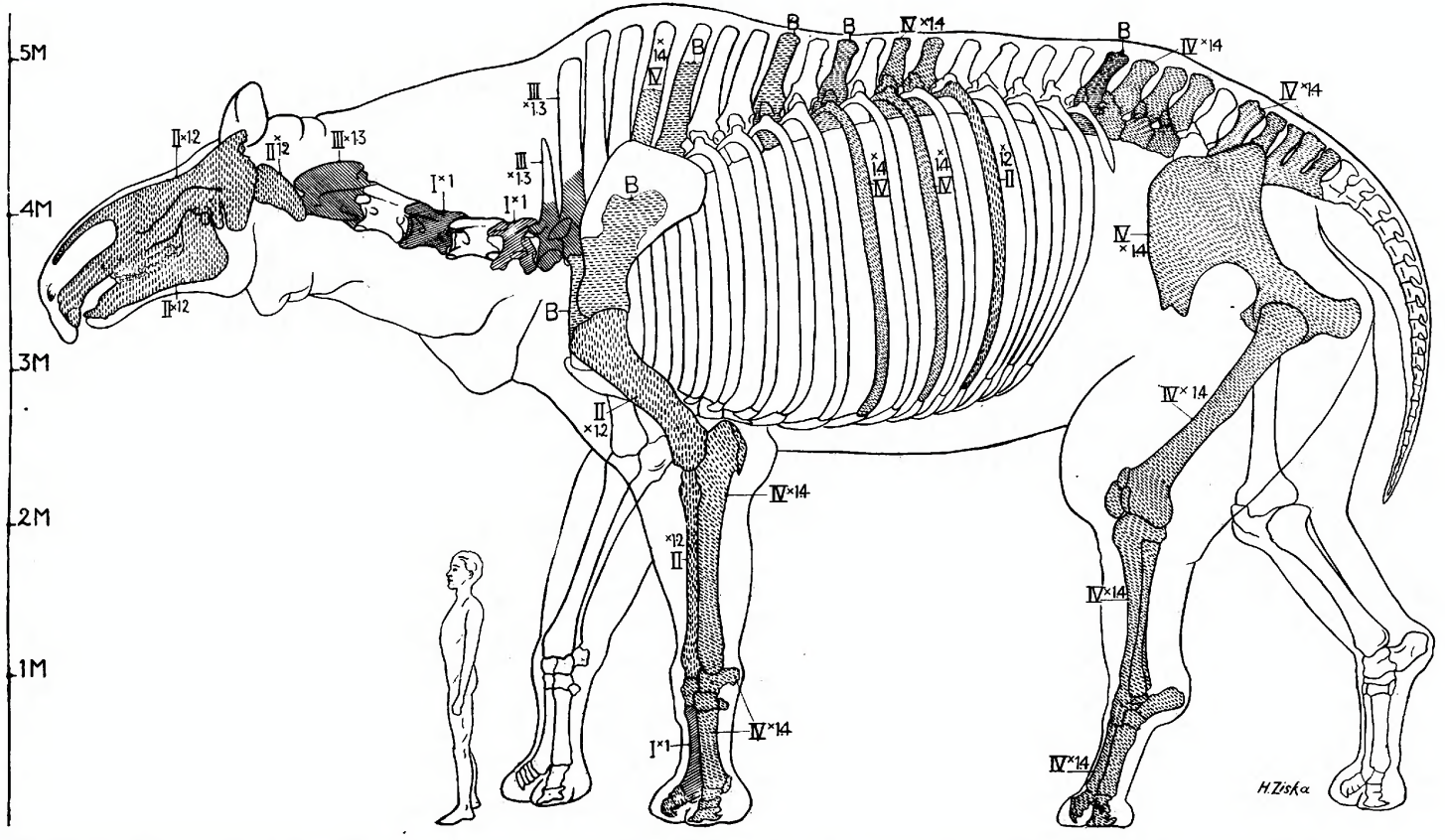

Fig. 1. Restoration of *Baluchitherium*, indicating, by differential shading, the parts belonging to animals of the four grades of size—Grade I being of maximum and Grade IV of minimum size. Bones marked B are from the Borissiak collection.

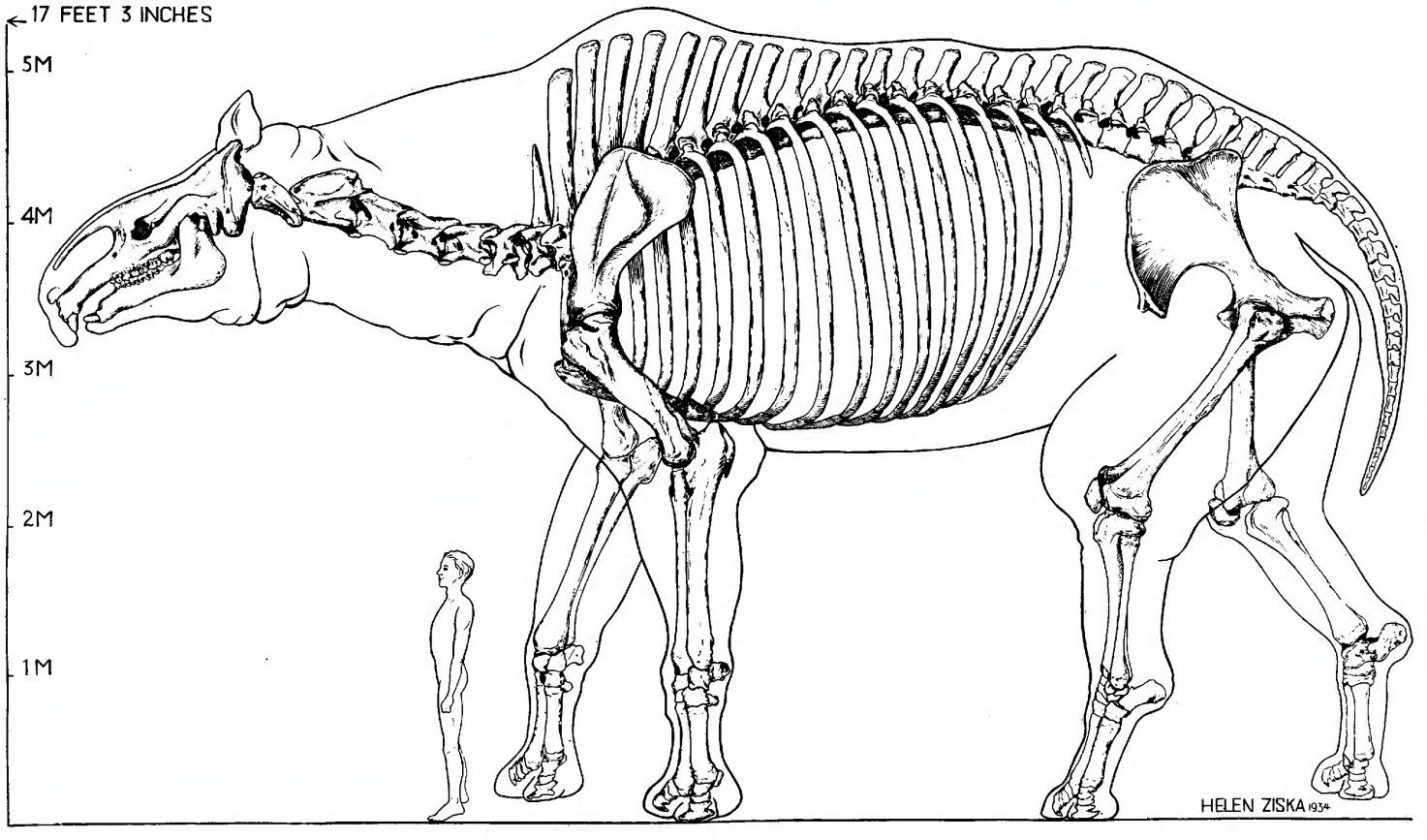

Fig. 2. Restoration of *Baluchitherium*. Based upon all available material and drawn to the size of the largest individual represented in the American Museum collection. A six-foot man is drawn to scale for comparison.